

S.N.: 10/024,107
Art Unit: 2643

AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application.

Listing of Claims:

1. (Currently Amended) A mobile station comprising:

a transceiver comprising a transmitter circuit having a transmit RF filter that passes a transmit band of frequencies that is partitioned into transmit frequency channels and a receiver circuit having a receiver RF filter that passes a receive band of frequencies that is partitioned into receiver frequency channels, wherein the transmit band of frequencies comprises at least one first end channel, at least one second end channel, and interior channels between the first and second end channels, wherein the receive band of frequencies comprises at least one first end channel, at least one second end channel, and interior channels between the at least one first and second end channels;

~~an antenna coupled to an output of said transmitter circuit and to an input of said receiver circuit; and~~

baseband circuitry capable of compensating for a non-ideal RF operation of channels from the transmit and receive bands of frequencies, the baseband circuitry for compensating for the a non-ideal operation of said RF filters of at least one of the at least one first and second end channels of the transmit and receive bands of frequencies and for not compensating for the non-ideal RF operation of said RF filters of any of the interior channels of the transmit and receive bands of frequencies ~~RF channel of the transmit and receive bands of frequencies when the at least one RF channel is selected, in which the non-ideal operation of said RF filters is not compensated for another RF channel of the transmit and receive bands of frequencies when the another RF channel is selected.~~

S.N.: 10/024,107
Art Unit: 2643

2. (Currently Amended) A mobile station as in claim 1, wherein said baseband compensating circuitry compensates for RF filter operation in a transmit RF channel that is nearest to said band of receive RF frequencies.

3. (Currently Amended) A mobile station as in claim 1, wherein said baseband compensating circuitry compensates for RF filter operation in a receive RF channel that is nearest to said band of transmit RF frequencies.

4. (Currently Amended) A mobile station as in claim 1, wherein said baseband compensation circuitry is comprised of at least one of digital logic and a digital signal processor (DSP) device.

5. (Currently Amended) A mobile station as in claim 1, wherein said baseband compensation circuitry is comprised of a finite impulse response (FIR) device, wherein compensating the signal to be transmitted is accomplished by one of the group consisting of changing values of taps of the FIR device and changing a number of taps of the FIR device.

6. (Original) A mobile station as in claim 1, where said transmit range of frequencies is about 60MHz, where said receive range of frequencies is about 60MHz, and where said transmit range of frequencies and said receive range of frequencies are separated by about 20MHz.

7. (Original) A mobile station as in claim 1, where said transmit range of frequencies is about 60MHz that is partitioned into 12 frequency channels, where said receive range of frequencies is about 60MHz that is partitioned into 12 frequency channels, and where a highest frequency channel in said transmit range of frequencies and a lowest frequency channel in said receive range of frequencies are separated by about 20MHz.

8. (Currently Amended) A method for operating a mobile station comprising:

providing the mobile station with a transceiver having a transmitter circuit having a transmit RF filter that passes a transmit band of frequencies that is partitioned into

transmit frequency channels and a receiver circuit having a receiver RF filter that passes a receive band of frequencies that is partitioned into receiver frequency channels, wherein the transmit band of frequencies comprises at least one first end channel, at least one second end channel, and interior channels between the at least one first and second end channels, wherein the receive band of frequencies comprises at least one first end channel, at least one second end channel, and interior channels between the first and second end channels;

~~coupling an antenna to an output of said transmitter circuit and to an input of said receiver circuit; and~~

compensating, in a baseband with the capability of compensating non-ideal RF filter operation for both RF receive and transmit channels, the non-ideal operation of said RF filters is provided for when at least one of the at least one first and second end channels of the transmit and receive bands of frequencies when the at least one of the at least one first and second end channels is selected and for not compensating the non-ideal operation of said RF filters of the interior channels of the transmit and receive bands of frequencies when one of the interior channels is selected ~~RF channel of the transmit and receive bands of frequencies is selected, wherein compensation for the non-ideal operation of said RF filters is not provided for at least a portion of a remainder of the transmit and receive band of frequencies when a frequency channel from the portion of the remainder of the transmit and receive band of frequencies is selected.~~

9. (Original) A method as in claim 8, wherein said step of compensating compensates for RF filter operation in a transmit RF channel that is nearest to said band of receive RF frequencies.
10. (Original) A method as in claim 8, wherein said step of compensating compensates for RF filter operation in a receive RF channel that is nearest to said band of transmit RF frequencies.
11. (Original) A method as in claim 8, wherein said step of compensating comprises operating at

S.N.: 10/024,107
Art Unit: 2643

least one of digital logic and a digital signal processor (DSP) device.

12. (Previously Presented) A method as in claim 8, wherein said step of compensating comprises operating a finite impulse response (FIR) device, wherein the compensating of the signal is accomplished by changing a number of taps of the FIR device.

13. (Original) A method as in claim 8, wherein said transmit range of frequencies is about 60MHz, where said receive range of frequencies is about 60MHz, and where said transmit range of frequencies and said receive range of frequencies are separated by about 20MHz.

14. (Original) A method as in claim 8, wherein said transmit range of frequencies is about 60MHz that is partitioned into 12 frequency channels, where said receive range of frequencies is about 60MHz that is partitioned into 12 frequency channels, and where a highest frequency channel in said transmit range of frequencies and a lowest frequency channel in said receive range of frequencies are separated by about 20MHz.

15. (Currently Amended) A circuit comprising means for coupling to a transceiver having a transmitter circuit comprising at least one transmit radio frequency (RF) filter that passes a transmit band of radio frequencies that is partitioned into transmit RF channels and a receiver circuit having at least one receiver RF filter that passes a receive band of radio frequencies that is partitioned into receive RF channels, wherein the transmit RF channels comprise at least one first end channel, at least one second end channel, and interior channels between the first and second end channels, wherein the receive RF channels comprise at least one first end channel, at least one second end channel, and interior channels between the at least one first and second end channels, and means for compensating, in a baseband, for at least one of the first and second end channels of the transmit and receive RF channels when the at least one of the at least one first and second end channels is selected and for not compensating for the non-ideal operation of said RF filters of the interior channels of the transmit and receive RF channels when one of the interior channels is selected, wherein the circuitry is capable for compensating for the non-ideal RF operation of channels from the transmit and receive bands of frequencies of RF filter operation in

S.N.: 10/024,107
Art Unit: 2643

~~a transmit RF channel that is nearest to the receive band of RF frequencies when the transmit RF channel is selected and for RF filter operation in a receive RF channel that is nearest to the transmit band of RF frequencies when the receive RF channel is selected, wherein RF filter operations of at least a portion of other channels of the transmit RF channels and receive RF channels are not compensated by the circuit when the other channels are selected.~~

16. (Previously Presented) A circuit as in claim 15, embodied at least in part by a programmed digital signal processor.

17. (Previously Presented) A circuit as in claim 15, where the receiver circuit comprises a direct conversion receiver.

18. (Previously Presented) A circuit as in claim 15, where a transmit range of frequencies is about 60MHz, where a receive range of frequencies is about 60MHz, and where said transmit range of frequencies and said receive range of frequencies are separated by about 20MHz.

19. (Previously Presented) A circuit as in claim 15, where a transmit range of frequencies is about 60MHz that is partitioned into 12 RF channels, where a receive range of frequencies is about 60MHz that is partitioned into 12 RF channels, and where a highest transmit RF channel and a lowest receive RF channel are separated by about 20MHz.

20. (Previously Presented) A circuit as in claim 15, comprising part of a wireless communications device, wherein a signal to be transmitted is compensated by being predistorted digitally.

21. (Canceled).

22. (Canceled).

23. (Canceled).

S.N.: 10/024,107
Art Unit: 2643

24. (Previously Presented) A method as in claim 12, wherein the changing of the number of taps of the FIR device is implemented in a digital baseband.

25. (Currently Amended) A mobile station comprising:

a transceiver comprising a transmitter circuit having a transmit RF filter that passes a transmit band of frequencies that is partitioned into transmit frequency channels and a receiver circuit having a receiver RF filter that passes a receive band of frequencies that is partitioned into receiver frequency channels, ~~wherein the transmit frequency channels comprise a first transmit frequency channel and a second transmit frequency channel, wherein the receiver frequency channels comprise a first receiver frequency channel and a second receiver frequency channel,~~ wherein the transmit RF channels comprise at least one first end channel, at least one second end channel, and interior channels between the first and second end channels, wherein the receive RF channels comprise at least one first end channel, at least one second end channel, and interior channels between the at least one first and second end channels;

~~an antenna coupled to an output of said transmitter circuit and to an input of said receiver circuit; and~~

baseband circuitry capable of compensating for a non-ideal RF operation of transmit frequency channels and receive frequency channels~~compensating circuitry~~, wherein ~~the~~ a non-ideal RF filter operation is compensated for one of the at least one first and second end channels of the transmit and receive bands of frequencies when selected and the non-ideal RF operation is not compensated for any of the interior channels of the transmit and receive bands of frequencies when selected~~the first transmit frequency channel by the compensating circuitry by predistorting a signal to be transmitted when the first transmit frequency channel is selected and the non-ideal RF filter operation is not compensated for the second transmit frequency channel by the compensating circuitry when the second transmit frequency channel is selected, wherein the non-ideal RF filter operation is compensated for the first receiver frequency channel by the~~

S.N.: 10/024,107
Art Unit: 2643

~~compensating circuitry when the first receiver frequency channel is selected and the non-ideal RF filter operation is not compensated for the second receiver frequency channel by the compensating circuitry when the second receiver frequency channel is selected.~~

26. (Currently Amended) A mobile station as in claim 25, wherein only the second end transmit RF frequency channel and only the first end receiver RF frequency channel are compensated by the compensating circuitry.

27. (Currently Amended) A mobile station as in claim 26, wherein the second end transmit RF frequency channel is nearer in frequency to the first end receiver RF channel frequency than to any other transmit RF frequency channel of the transmit band of frequencies.

28. (Currently Amended) A mobile station as in claim 27, wherein all signals of the transmit RF frequency channels follow a single path through a transmit RF passband filter and all signals of the receive RF frequency channels follow a single path through a receive RF passband filter.

29. (Currently Amended) A circuit comprising a circuit portion for coupling to a transceiver having a transmitter circuit comprising at least one transmit radio frequency (RF) filter that passes a transmit band of radio frequencies that is partitioned into transmit RF channels and a receiver circuit having at least one receiver RF filter that passes a receive band of radio frequencies that is partitioned into receive RF channels, wherein the transmit RF channels comprise at least one first end channel, at least one second end channel, and interior channels between the at least one first and second end channels, wherein the receive RF channels comprise at least one first end channel, at least one second end channel, and interior channels between the first and second end channels, and a circuit portion, in a baseband, for compensating for at least one of the at least one first and second end channels of the transmit and receive RF channels when the at least one of the at least one first and second end channels is selected and for not compensating for the non-ideal operation of said RF filters of the interior channels of the transmit and receive RF channels when one of the interior channels is selected, wherein the circuitry is capable of compensating the non-ideal RF operation of channels from the transmit and receive

S.N.: 10/024,107
Art Unit: 2643

~~bands of frequencies of RF filter operation of at least one RF channel of a transmit RF channel and a receive RF channel when the at least one RF channel is selected, wherein RF filter operations of other channels of the transmit RF channels and receive RF channels are not compensated by the circuit when the other channels are selected.~~

30. (Previously Presented) A circuit as in claim 29, wherein the circuit portion for compensating is embodied at least in part by a programmed digital signal processor.

31. (Previously Presented) A circuit as in claim 29, further comprising part of a wireless communications device, wherein a signal to be transmitted is compensated by being predistorted digitally.

32. (Currently Amended) A circuit as in claim 29, wherein the ~~at least one RF channel of the at least one first and second end channels of the transmit and receive RF channels~~ comprises a transmit RF channel that is nearest to the receive band of RF frequencies and a receive RF channel that is nearest to the transmit band of RF frequencies.

33. (Currently Amended) A circuit as in claim 29, wherein the ~~at least one RF channel of the at least one first and second end channels of the transmit and receive RF channels~~ comprises end channels of the transmit band of RF frequencies and end channels of the receive band of RF frequencies.